

A GUIDE TO MISSOURI'S **TURTLES**



MISSOURI DEPARTMENT OF CONSERVATION

A Guide to Missouri's Turtles

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Front Cover: Basking western painted turtles. Photo by Jim Rathert.

Back Cover: Hatchling Northern Map Turtle. Photo by Jeffrey T. Briggler.



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GET TO KNOW MISSOURI'S TURTLES

Turtles and tortoises represent the oldest living group of reptiles on earth. Reptiles are a class of animals that includes crocodiles and alligators, tuatara, lizards, amphisbaenians, and snakes. Turtles are generally hard-shelled animals. They are known from fossils as far back as the Triassic Period — over 200 million years ago — and have changed little since they became established. There are more than 340 known species of turtles and tortoises in the world. Missouri has 18 species of turtles, with one additional subspecies or geographic races, that represent four different families.

The turtles of Missouri can be divided into one of three groups: hard-shelled aquatic turtles, soft-shelled aquatic turtles, and hard-shelled land turtles. The hard-shelled aquatic group has the greatest



JIM RATHERT

Turtles need to bask in the sun to increase body temperature, reduce fungal infections by drying out, and soak up ultraviolet rays. Ultraviolet rays are needed to produce vitamin D for healthy growth



Three-toed box turtles eat a variety of plants and animals, including terrestrial snails.

number of species and includes some of the smallest species (musk turtle or painted turtles), as well as the largest freshwater turtle (alligator snapping turtle). The soft-shelled aquatic group is represented by two species. The hard-shelled, land-dwelling turtles are represented by two species of box turtles; sometimes mistakenly called “tortoises,” they are actually closely related to pond turtles such as cooters, sliders, and painted turtles.

Turtle shells have two main parts: the carapace (upper section) and plastron (lower section). The shell of most species is composed of bony plates covered by a layer of horny scales called scutes. Softshells, however, have reduced bony plates that are covered by tough skin instead of scutes.

Aquatic turtles have a variety of habitat requirements depending on the species. Some, like the red-eared slider, can live in nearly any natural or constructed body of water — as long as there is ample aquatic vegetation for food and security, and suitable basking sites. The alligator snapping turtle, a rare species and the largest species in Missouri, lives in large rivers where adequate food (mostly fish) and cover (deep holes with root snags) are found. The various map turtles thrive in headwater streams, the clear, cool rivers of the Ozarks, and other large rivers where

the turtles can find their favorite foods: snails, naiads (i.e., immature insects), and crayfish. Life on the land has allowed box turtles to have a diversified diet: insects, earthworms, land snails, mushrooms, berries, and young shoots of various plants. Turtles do not have teeth; they were lost eons ago through the process of evolution. Both the upper and lower jaws are covered with a sharp-edged beak. The lower jaw fits inside the upper jaw, allowing turtles to use their jaws like scissors to bite off bits of food.

All turtles lay eggs on land. Females are particular about where they lay and bury their eggs and may travel long distances overland to find a suitable location. Most turtles select well-drained, sandy, or loose soil to deposit their eggs. The sites usually face south or southeast. Turtle eggs may be hard- or soft-shelled, round, or elongated, depending on the species. Stinkpots, mud turtles, and softshells lay hard-shelled eggs, which contain a large amount of calcium in the eggshell. Other species lay soft, leathery-shelled eggs with a proportionately lower amount of calcium in the shell. The largest species of turtles all lay spherical eggs: alligator snapping turtle, eastern snapping turtle, and softshells. All the rest lay elongated eggs. Turtle eggs either hatch in late summer or early



JEFFREY T. BRIGGLER

A female red-eared slider laying eggs on land by burying them in the soil.



Map turtle eggs are deposited in sandy or loose soils along the banks of rivers and streams.

fall, or the young turtles may remain in the egg or nest all winter and emerge the following spring. Vocalization by well-developed embryos within days of hatching or recent hatchlings within a nest is increasingly being discovered in many turtle species. Use of various sounds, especially clicking, might be a form of communication among siblings to begin hatching.

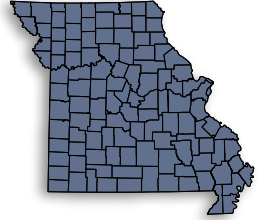
SPECIES ACCOUNTS

For more details, visit mdc.mo.gov/field-guide.

Eastern Snapping Turtle

Chelydra serpentina (Linnaeus)

About: This common Missouri turtle is one of the most abundant turtles in the eastern half of the United States. Eastern snapping turtles inhabit a wide variety of aquatic habitats: farm ponds, streams, rivers, swamps, and lakes. Contrary to popular belief, this turtle is more of a scavenger than a predator and feeds on both animal matter and aquatic plants. This turtle is economically important because large numbers are captured and eaten by people. The eastern snapping turtle is considered a game species and is regulated by a season and bag limit under the *Wildlife Code of Missouri*.



Description: This aquatic species has a large head with a pronounced beak, long thick tail, and small lower shell. The head, limbs, and tail are brown. The upper shell may be tan, brown, or gray-brown, and it is often covered with mud or algae.

Length: Ranges in upper shell length from 8 to 14 inches (203 to 356 mm).

Diet: Wide variety of animals (e.g., insects, crayfish, earthworms, fish, amphibians, small snakes, and small mammals) and numerous plant materials.

Missouri Distribution: Statewide.

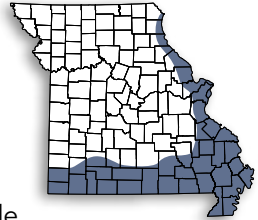


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Alligator Snapping Turtle

Macrochelys temminckii (Harlan)

About: This is the largest species of freshwater turtle in the world. This species' preferred habitat includes deep, muddy pools of large rivers, deep sloughs, and oxbow lakes. This species eats mostly fish and has an unusual ability to lure fish into its mouth. The tongue of the alligator snapping turtle has a special tip that resembles a worm, and the turtle uses it to attract fish close enough to capture and eat. Although this rare species has declined since historical times, it appears to be expanding its range within the state and is likely becoming more stable. It is unlawful to capture, collect, or kill the alligator snapping turtle in this state.



Description: This species can be distinguished from the eastern snapping turtle by the extremely large head and more pronounced hooked beak. The head, limbs, and upper shell are dark brown. There are three prominent rows of ridges on the upper shell. The skin on the neck and other areas may be yellowish-brown.

Length: Ranges in upper shell length from 15 to 20 inches (381 to 508 mm).

Diet: Mainly fish, but also a variety of animals (e.g., snails, crayfish, small turtles, snakes, and small mammals) and plant materials (e.g., acorns and persimmons).

Missouri Distribution: Occurs in the southern, southeastern, and eastern sections of the state.



TOM R. JOHNSON

Snapping Turtle Identification

The eastern snapping turtle and alligator snapping turtle are similar species that are often misidentified. The alligator snapping turtle is considered rare in Missouri and is not a game species like the eastern snapping turtle. This information will assist in the correct identification

Eastern Snapping Turtle

Top view of shell:

- Low ridges that follow the contour of the upper shell
- Ridges become smooth as the turtle grows older



Top view of head:

- Eyes visible from above



Side view of head:

- Smaller beak



Side view of upper shell:

- Single row of scales on side



Alligator Snapping Turtle

Top view of shell:

- Raised, straight line rows of ridges



Top view of head:

- Eyes not visible from above



Side view of head:

- Larger beak



Side view of upper shell:

- Extra row of scales on side



of these two species, especially hatchlings. Conservation Department biologists would like your help locating alligator snapping turtles. If you see one, take a photo if possible and report the sighting to your local office or State Herpetologist Jeff Briggler. *Photos by Jeffrey T. Briggler.*

Eastern Snapping Turtle

View of tail:

- Raised sawtooth bumps



Hatchling

- Gray-brown
- White spots on edge of upper shell and on lower shell



Alligator Snapping Turtle

View of tail:

- Round bumps



Hatchling

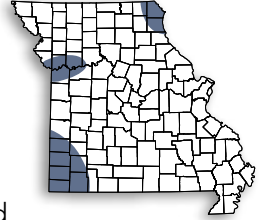
- Typically, orange-brown
- No white spots on upper or lower shell



Yellow Mud Turtle

Kinosternon flavescens (Agassiz)

About: This semi-aquatic turtle spends most of its time on land. The yellow mud turtle prefers grassy, sandy areas near wetlands. During the spring and early summer, it lives in aquatic habitat such as marshes, streams, oxbow lakes, and flooded fields. It spends the winter, as well as the hot months of summer, buried in the sand on land. The yellow mud turtle is protected as an endangered species in Missouri because of its small range, loss of habitat, and significant decline.



Description: A small, brown, olive-brown, or black turtle with a somewhat flattened upper shell. There is some yellow on the chin and neck and along the edge of the upper shell. The lower shell is normally yellow with some brown coloration along the scute seams.

Length: Ranges in upper shell length from 4 to 5 inches (102 to 127 mm).

Diet: Variety of aquatic animals (e.g., insects, snails, crayfish, and tadpoles) and occasionally aquatic plants.

Missouri Distribution: Occurs in a few counties in southwestern Missouri, the Kansas City area, and northeastern part of state.

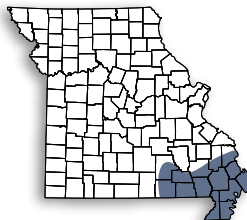


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Mississippi Mud Turtle

Kinosternon subrubrum hippocrepis Gray

About: This small, common species may be found in or near swamps, sloughs, oxbow lakes, ponds, ditches, and canals, especially in the Bootheel. It is most often seen in vegetated, shallow water with soft bottoms. During the spring and summer, they are often seen crossing roads and highways. Preserving the natural habitats of this species, especially the wetlands surrounded by forested bottomlands, will keep this turtle common in Missouri.



Description: The Mississippi mud turtle is normally dark brown or black. There are usually two wide and irregular yellow stripes along each side of the head and neck. The lower shell is normally yellow with a rich mottling of brown.

Length: Ranges in upper shell length from 3 to 5 inches (76 to 127 mm).

Diet: Wide variety of small aquatic animals and some plants.

Missouri Distribution: Southeastern part of state.

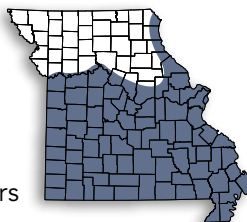


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Eastern Musk Turtle

Sternotherus odoratus (Latreille in Sonnini and Latreille)

About: This is Missouri's smallest species and one of the world's smallest turtles. Eastern musk turtles may be found in a variety of aquatic habitats: streams, rivers, sloughs, swamps, and large lakes. In Missouri, this species is most abundant in Ozark rivers and streams. The name "musk turtle" or "stinkpot" refers to the odor this species gives off when captured. The odor is produced by musk glands in the skin just below the upper shell along the sides.



Description: The eastern musk turtle is a dark colored turtle with a domed upper shell and reduced lower shell. General coloration is dark gray to black; the lower shell is yellow with some brown mottling. There are normally two thin, yellow stripes on each side of the head and neck.

Length: Ranges in upper shell length from 2 to 4.5 inches (51 to 114 mm).

Diet: Mostly a variety of invertebrates (e.g., insects, earthworms, crayfish, mollusks), but also plants and their seeds.

Missouri Distribution: Occurs throughout most of Missouri except for the northwestern third of the state.

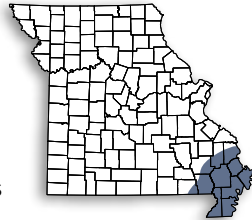


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Southern Painted Turtle

Chrysemys dorsalis Agassiz

About: This colorful aquatic turtle is North America's smallest painted turtle. It prefers still, quiet water of shallow swamps, streams, sloughs, and oxbow lakes. They are often seen basking on logs, clumps of vegetation, or along the banks during the warmer months. Southern painted turtles overwinter in the deeper part of wetlands and are often buried in the soft mud.



Description: This turtle's head and forelimbs are strongly patterned with yellow lines. Its upper shell is olive-brown to almost black with a prominent yellow, orange, or orange-red stripe running down the center. The upper shell underside along the outer edge is often orange or orange-red. The lower shell is plain yellow or tan.

Length: Ranges in upper shell length from 4 to 5 inches (102 to 127 mm).

Diet: Prefers aquatic invertebrates, such as snails, crayfish, and insects, but also some plant materials.

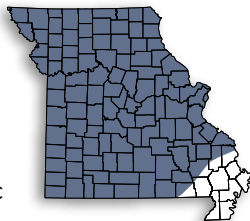
Missouri Distribution: Southeastern part of the state.



Western Painted Turtle

Chrysemys picta bellii (Gray)

About: This small, aquatic turtle is quite common in Missouri, especially in wetlands located in the grassland regions of the state. This species occurs in slow moving rivers, sloughs, oxbow lakes, ponds, and drainage ditches. Habitat requirements include ample mud at the bottom, abundant aquatic vegetation, and basking sites such as logs or half-submerged rocks. Like the southern painted turtle, this species spends much time basking, and they are occasionally seen crossing roads, fields, and yards.



Description: This brightly colored turtle has a smooth, olive, olive-brown, or nearly black upper shell. The upper shell normally has yellow, irregular lines and a reddish-orange outer edge. Head and legs may be dark brown or black and strongly patterned with yellow lines. The lower shell is usually red-orange with a prominent pattern of brown markings that follows the scute seams toward the outer edge.

Length: Ranges in upper shell length from 4.5 to 8 inches (114 to 203 mm).

Diet: Variety of invertebrates (e.g., insects, snails, crayfish), aquatic plants, and some fish.

Missouri Distribution: Nearly statewide, except for southeastern part of state.

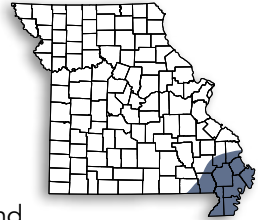


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Western Chicken Turtle

Deirochelys reticularia miaria Schwartz

About: The western chicken turtle is one of Missouri's rarest turtle species. This species prefers still to slow-moving aquatic habitats, including swamps, river sloughs, oxbow lakes, and drainage ditches in spring and early summer. It spends much time basking in the sun on logs with its long neck stretched out. It is known to wander about on land and spends the winter, as well as the hot months of summer, buried in the soil beneath vegetation or leaf litter. With the loss of bottomland forest and wetlands, the western chicken turtle is an endangered species in our state.



Description: This is a small- to medium-sized turtle with an oval-shaped shell and an extremely long neck. The upper shell may be brown or olive, with faint, yellowish-brown lines forming a netlike pattern over the shell. The lower shell is yellow with some brown along the scute seams. The head and limbs are brown or black with numerous yellow or yellowish-green stripes. The underside of the head and neck is plain yellow.

Length: Ranges in upper shell length from 4 to 6 inches (102 to 152 mm).

Diet: Variety of invertebrates (e.g., aquatic insects, crayfish, spiders), tadpoles, and occasionally aquatic plants.

Missouri Distribution: Southeastern part of the state.

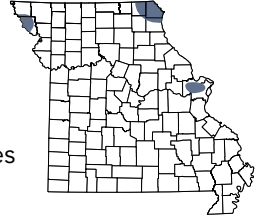


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Blanding's Turtle

Emydoidea blandingii (Holbrook)

About: This semi-aquatic turtle may spend much of its time in shallow water along the edge of marshes or basking in the sun on logs. They frequently move in prairies and grasslands near and between wetlands. Preferred aquatic habitat includes natural marshes and river sloughs, but this species also may live in ponds and drainage ditches. Due to limited numbers and a reduction of natural habitats (grasslands and wetlands), this species has been listed as endangered in Missouri.



Description: This medium-sized turtle has an oval-shaped, moderately high-domed upper shell and a long head and neck. The upper shell may be dark brown or black with many yellow spots or bars. The lower shell is yellow with a large, dark brown blotch on the outer portion of each scute, and the forward third is hinged and movable. Head and limbs are brown and yellow; the chin and underside of neck are usually bright yellow.

Length: Ranges in upper shell length from 6 to 9 inches (152 to 229 mm).

Diet: Variety of aquatic insects, snails, crayfish, small fish, and aquatic plants.

Missouri Distribution: Occurs in a few counties in extreme northeastern and northwestern Missouri with historic accounts in the St. Louis area.

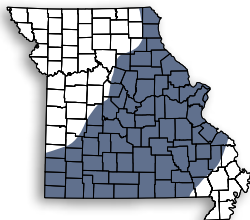


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Northern Map Turtle

Graptemys geographica (LeSueur)

About: The northern map turtle prefers small rivers, streams, sloughs, and oxbow lakes. This species will spend much time basking in the sun on logs or other objects but will quickly dash into the water at the slightest disturbance. It is the most common map turtle observed when floating Ozark rivers and streams. Female northern map turtles, which are considerably larger than males, can more easily crack the shells of mollusks and crayfish with their jaws.



Description: This medium-sized turtle has a low ridge along the center of the upper shell. The hind edge of the upper shell is strongly serrated. The upper shell normally is brown or olive-brown with a netlike pattern of fine yellow lines, giving the shell the appearance of a road map. The lower shell of this species is light yellow; the seams between scutes are dark brown. The head and limbs are brown with thin yellow lines. A small yellow spot is present behind each eye.

Length: Ranges in upper shell length from 4 to 11.5 inches (102 to 292 mm).

Diet: Variety of aquatic insects, snails, mollusks, and crayfish.

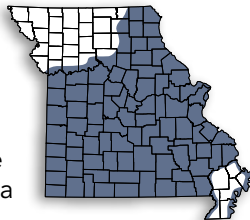
Missouri Distribution: Occurs primarily in the Ozark Highlands and upper Mississippi River in northeastern part of state.



Ouachita Map Turtle

Graptemys ouachitensis Cagle

About: This aquatic turtle lives in slow-moving rivers, sloughs, oxbow lakes, and reservoirs. Like other species of map turtles, it is often observed basking on logs or rocks over the water. Ouachita map turtles about to hatch and recent hatchlings are known to produce sounds among each other within a nest that might trigger hatching or nest departure.



Description: This is a small- to medium-sized turtle with a prominent ridge down the center of the upper shell and bright yellow lines on the head and limbs. The upper shell is brown or olive with the rear edge being strongly serrated. The lower shell is plain yellow with faint gray markings, especially between seams of scutes. The head and limbs are olive with numerous thin, yellow lines. There is a wide, yellow marking behind each eye and a large yellow spot below each eye.

Length: Ranges in upper shell length from 3 to 9.5 inches (76 to 241 mm).

Diet: Variety of aquatic insects, worms, crayfish, snails, and occasionally aquatic plants.

Missouri Distribution: Scattered throughout much of the state, except for southeastern and northwestern parts of the state.

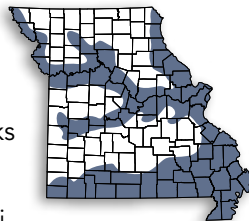


JEFFREY T. BRIGGLER

Northern False Map Turtle

Gratemys pseudogeographica
pseudogeographica (Gray)

About: This medium-sized aquatic species lives primarily in rivers, river sloughs, oxbow lakes, and constructed reservoirs. It will often bask on logs or rocks but is cautious and will quickly drop off into the water at the slightest sign of danger. Although this species is the most common turtle in the Missouri and Mississippi rivers, it is subject to high nest predation by raccoons and skunks because of the declining number of sand bars and islands needed for nesting.



Description: This species has a low ridge along the center of the upper shell. The upper shell is brown or olive with narrow, yellow, connected circles or lines, and the rear edge is strongly serrated. The lower shell is yellow with several light brown lines following the seam of each scute. The head and neck of the false map turtle is brown or greenish-gray with numerous yellow lines bordered by dark brown or black. The thick, yellow line behind each eye forms a backward "L" shape. A subspecies, the Mississippi map turtle, *G. p. kohnii*, is very similar to the northern false map turtle. It differs by a crescent-shaped yellow stripe behind the eye. Notice the "wide-eyed" or staring appearance of this species' eye. This is caused by the bright yellow eye with a round, black pupil.

Length: Ranges in upper shell length from 3.5 to 10.5 inches (89 to 267 mm).

Diet: Aquatic plants and animals such as snails, insects, crayfish, and dead fish.

Missouri Distribution: Occurs in large rivers, such as the Missouri, Osage, and upper Mississippi, while a subspecies, the Mississippi map turtle, *G. p. kohnii* (Baur) occurs in southern and southeastern part of the state.

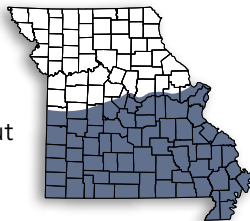


TOM R. JOHNSON PHOTOS

Eastern River Cooter

Pseudemys concinna concinna (LeConte)

About: During the spring and summer, eastern river cooters spend a considerable amount of time basking in the sun on logs. The eastern river cooter is most abundant in Missouri's rivers and sloughs, but also has taken up residence in some of our state's large reservoirs. Due to this species' preference of eating plant material and algae, it has an extremely long intestine to increase digestion efficiency.



Description: This large, aquatic turtle has a proportionately small, blunt head. General coloration is an olive-brown upper shell with numerous concentric yellow lines. The head and limbs are normally dark brown or black with many yellow lines. The lower shell is usually plain yellow, or it may have some faint gray markings on the forward section.

Length: Ranges in upper shell length from 9 to 13 inches (229 to 330 mm).

Diet: Primarily aquatic plants, but also aquatic insects, snails, and crayfish.

Missouri Distribution: Southern half of the state.

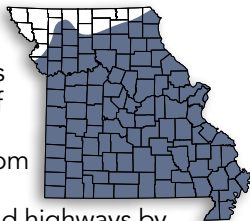


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Three-toed Box Turtle

Terrapene carolina triunguis (Agassiz)

About: This small, land-dwelling turtle prefers a habitat of oak-hickory forest with numerous openings and edge areas along brushy fields. Daily activities of this species begin with a period of feeding, followed by basking in the sun in an open area. Females lay from two to eight elongated, white eggs. Unfortunately, thousands of these reptiles are killed on our roads and highways by vehicles. Most Missourians are familiar with this species, and it is fitting that it has been named the official state reptile.



Description: This reptile has a high-domed upper shell that may be plain olive or olive-brown with faint yellowish lines radiating from the center of each large scute. The lower shell has a distinct hinge across the forward third of the shell that allows the turtle to close the lower shell up against the upper shell for protection. The lower shell is plain yellow with some brown smudges. The head, neck, and limbs may be brown or black with a varied amount of yellow and orange, depending on the age and gender of the turtle. Although most specimens have three toes on each hind foot, some individuals may have four on each hind limb. There is an influence of the eastern box turtle, *T. c. carolina*, along the Mississippi River counties.

Length: Ranges in upper shell length from 4 to 5 inches (102 to 127 mm).

Diet: Variety of plants and their fruits, as well as numerous insects, earthworms, and snails.

Missouri Distribution: Nearly statewide.

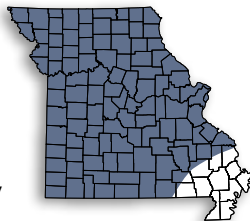


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Ornate Box Turtle

Terrapene ornata (Agassiz)

About: This small, colorful, land-dwelling turtle is a fairly common resident of the grasslands and native prairies in the northern and western parts of Missouri. This species resides in pastures, open woods, glades, grasslands, and prairies. Ornate box turtles spend the winter beneath the cold surface by burying themselves in loose soil or sand or entering burrows made by other animals. Similar to the three-toed box turtle, this species is illegally collected for the pet trade and often killed by vehicles while crossing highways.



Description: The domed upper shell of the ornate box turtle is normally brown with numerous yellow lines radiating from the center of each scute. The hinged lower shell is brown with distinct yellow lines, spots, and blotches. The head and limbs are grayish brown to dark brown with yellow spots and blotches. There are normally four toes on each hind limb.

Length: Ranges in upper shell length from 4 to 5 inches (102 to 127 mm).

Diet: Primarily insects (e.g., crickets, grasshoppers, and beetles), but also berries and tender plant shoots.

Missouri Distribution: Statewide, except for the southeastern corner of the state.

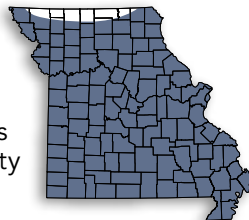


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Red-eared Slider

Trachemys scripta elegans (Wied-Neuwied)

About: This is one of the most common aquatic turtles in Missouri. Red-eared sliders may live in a variety of aquatic habitats: rivers, sloughs, oxbow lakes, and constructed lakes and ponds. This species prefers aquatic habitats with mud bottoms and plenty of aquatic plants, and it spends much time basking in the sun on logs or rocks. Although this species is native to the south-central United States, including Missouri, it has been introduced throughout the world due to the pet trade and is considered the most invasive turtle species in the world.



Description: The color of the upper shell is olive-brown with numerous black and yellow lines. The lower shell is yellow with a large dark brown blotch on each scute. The head and limbs are dark green with narrow black and yellow lines. A distinct red or orange stripe is normally present on each side of the head behind the eye. Old males are often covered with an excess of black pigment that not only obscures the red stripes behind the eyes, but also the yellow stripes on the upper shell and skin.

Length: Ranges in upper shell length from 5 to 8 inches (127 to 203 mm).

Diet: Variety of aquatic plants and animals.

Missouri Distribution: Statewide, except for a few northern counties of the state.

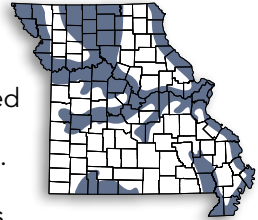


JEFFREY T. BRIGGLER

Midland Smooth Softshell

Apalone mutica mutica (LeSueur)

About: This turtle mainly resides in large rivers and streams where sand or mud is abundant, but also has been found in large oxbow lakes and constructed reservoirs. Softshells are powerful swimmers; thus, allowing them to maneuver the strong river currents. In the wild, this species is no threat to game fish populations. Due to channelization of rivers and loss of sand bars, the midland smooth softshell is likely declining in Missouri. This reptile is considered a game species and is regulated by a season and bag limit under the *Wildlife Code of Missouri*.



Description: This aquatic species has a round, smooth upper shell without scutes, extensive webbing on front and hind limbs, and a long, tubular snout. General coloration of the upper shell varies with age and sex. Male smooth softshells and young have an olive-gray or brown upper shell with faint markings of dots and dashes. Adult females, which are much larger than males, have a mottled upper shell with blotches of gray, olive, or brown. The lower shell of this species is a plain cream color. Head and limbs are olive or gray above, and light gray or cream colored below. A light yellow line bordered by black is usually present behind each eye.

Length: Ranges in upper shell length from 4.5 to 14 inches (114 to 356 mm).

Diet: Variety of aquatic animals including small fish, crayfish, tadpoles, snails, and aquatic insects.

Missouri Distribution: Large rivers throughout the state.

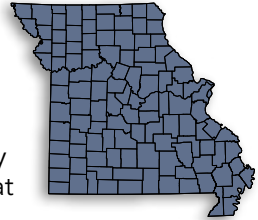


JEFFREY T. BRIGGLER

Eastern Spiny Softshell

Apalone spinifera spinifera (LeSueur)

About: This medium- to large-sized species resides in large rivers, lakes, large ponds, and even roadside water-filled ditches. It prefers a muddy or sandy bottom, but it is also found in gravel-covered bottoms in Ozark rivers and streams. It eats a variety of aquatic animals, including fish, but it is not a threat to Missouri's game fish population. This species is considered a game species and is regulated by a season and bag limit under the *Wildlife Code of Missouri*.



Description: This turtle has dark spots on the limbs, a small ridge on each side of the snorkellike snout, and numerous small bumps or spines on the front of the upper shell. Coloration of the upper shell varies with age and sex. Adult males and young turtles have an olive or grayish-tan upper shell with distinct, small black dots and circles and a black line along the margin. Adult females, which are much larger than males, have a dark olive or tan upper shell with brown and gray blotches. The lower shell is a plain cream color. Head and limbs are normally tan or olive with small brown or black markings. A yellow line, bordered by black, extends from the snout through the eye and along each side of the head. The stripe may be faint in some individuals.

Length: Ranges in upper shell length from 5 to 21 inches (127 to 533 mm).

Diet: Variety of aquatic insects, as well as earthworms, crayfish, snails, small fish, and tadpoles.

Missouri Distribution: Statewide.



MISSOURI'S TURTLES AND THEIR CONSERVATION

The term conservation means the wise use of our natural resources. Natural resources have to do with more than our air, water, soil, forests, minerals, and energy. How many people look upon a swamp or marsh and call it a valuable natural resource? Many people have not considered special wildlife habitats as something to be valued and protected from destruction.

Although turtles have been around for many millions of years, their very existence may be in peril — not so much because of those killed by illegal shooting or careless motorists. We have literally taken away or permanently altered their homes — the rivers, sloughs, swamps, and marshes where they have lived for countless generations. Draining the swamps and marshes for agriculture, water pollution, stream channelization, climate change, destruction of forests, and strip mining have all added to the general decline of many of our native turtles.



JEFFREY T. BRIGGLER

Natural marshes in northern Missouri are important habitats for a variety of turtles.



Natural cypress swamps in southeastern Missouri are important habitats for a variety of turtles.

Without their natural habitat, our turtles, as well as many other wildlife species, are unable to reproduce and remain a part of the environment. To protect species, especially rare and endangered ones, we need to understand their habitat requirements and protect that which is vital to their survival.

Some people have looked upon aquatic turtles as a lowly group with little to no value and a menace to fish populations and the sport of fishing. Research, however, has shown that turtles pose no threat to natural fish populations, that many Missouri species eat mostly aquatic plants and invertebrates, and that these animals have a proper place in the balance of nature. Turtles play an important role as a part of the check-and-balance system in our lakes and rivers and deserve a healthy environment and a chance to survive as much as any other creature.

Another threat to our turtle species is the continued plundering by thoughtless people. It is unlawful to shoot turtles in Missouri, yet people use basking turtles along our rivers for target practice. Taking the life of a non-game animal for the sake of having something to shoot shows a lack of conscience and proper outdoor ethics — and is illegal. Away

***Spread the word:
Do not intentionally
run over turtles.***

from the rivers, on Missouri's roadways, thousands of turtles are killed each year by cars and trucks. Many Missourians attempt to avoid running over box turtles in the road, and others go out of their way to stop and assist a turtle across the road. Others, however, deliberately run over turtles crossing roads or highways. Amphibians and reptiles, especially migrating salamanders, turtles, and snakes, are often the wildlife populations most affected by road kills.

Missouri's turtle resource also has been damaged by people who take box turtles as souvenirs of the Ozarks and eventually, through neglect or unawareness, allow the reptiles to slowly starve to death while keeping them in their basements. Although Missourians are allowed to keep some species of wildlife as pets without a special permit, it is usually harmful to the animal involved. If you are truly interested in keeping a turtle as a pet, you should learn as much as possible about their natural history and proper captive conditions required to keep them. Box turtles do poorly in captivity during the winter. Most people find it better to keep a turtle during the summer and release it in early fall in the same



JEFFREY T. BRIGGLER

Many species of animals, especially turtles, are accidentally or deliberately killed by motorists each year.

place where it was captured. Nevertheless, box turtles and all native wildlife are much better off if left in the wild.

Several turtle species — softshells and the eastern snapping turtle — are considered game animals in Missouri and are highly valued as a human food source. A Missouri fishing permit is required for taking game turtles from the waters of Missouri. There is no up-to-date information on how many turtles are taken each year as game, but many people enjoy various recipes using turtle meat. Some folks enjoy softshell meat but would not consider eating snapping turtle. Others contend that there are seven kinds of meat on a turtle.

Most Missouri turtles may have a life expectancy of 15 to 40 years, but there are some exceptions: box turtles are known to live 80 to more than 100 years, and a specimen of the alligator snapping turtle lived at the Philadelphia Zoo for 70 years. Giant, island dwelling land tortoises have been reported to live more than 120 years.

Many of our native turtles do not have the ability to change or alter their lifestyles to survive in a rapidly disappearing and changing environment, and these long-lived, interesting animals need our help to remain part of our outdoor heritage. As with all other native Missouri wildlife, turtles are part of the natural food chain and play an important role in the balance of nature. Turtles are a fascinating part of the natural world in which we live and seeing turtles enjoying the sun while basking or watching hatchling turtles emerging from their underground nest can add to your outdoor adventures.

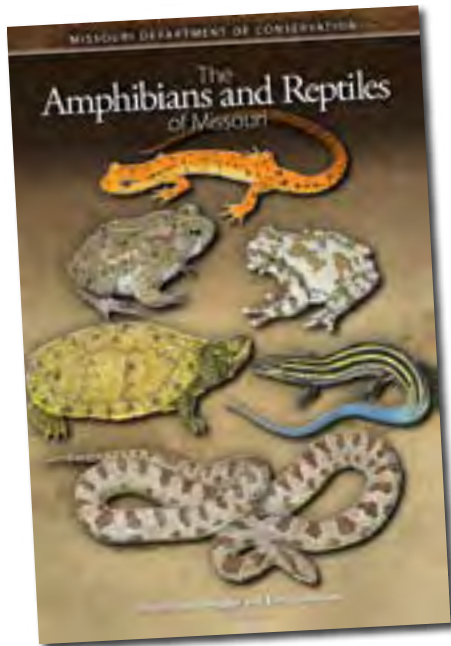


JEFFREY T. BRIGGLER

Eastern snapping turtle on log.

Help protect Missouri's turtles

- Shooting turtles is prohibited.
- Turtles pose no threat to natural fish populations.
- Missouri has 18 species of turtles; all are protected as either non-game or game species.
- Only the eastern snapping turtle and both softshell species are considered game and may be taken by approved methods.
- It is illegal to capture, sell, or trade Missouri's turtles for the pet trade.
- Commercialization of turtles for international food trade is prohibited.
- Turtles are beneficial scavengers; they eat water plants, dead animals, snails, aquatic insects, and crayfish.
- Swimmers should not fear turtles; they rarely bite underwater unless they are provoked or handled.



To help you learn more about Missouri's frogs and toads, consider purchasing *The Amphibians and Reptiles of Missouri* (2021) third edition by State Herpetologist Jeffrey T. Briggler and retired State Herpetologist Tom R. Johnson. This updated and expanded 522-page book is a valuable resource for understanding and identifying some of Missouri's most interesting species. To purchase, go online to mdcnatureshop.com or call 573-522-0108.



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